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October 20, 1977

Mrs. Lorraine Mintzmeyer
Park Superintendent
Buffalo National River
P. O. Box 11-3
Harrison, Arkansas 72601

Dear Mrs. Mintzmeyer:

On September 21, 1977, Terrence Rogers and Phyllis Dugar visited three areas of the Buffalo National River. In the Lost Valley and Leatherwood areas, problems were encountered on American beech and hickory. The insects most commonly noticed were beech blight aphids, Prociphilus imbricator (Fitch).

Large numbers of these insects occasionally feed on the undersides of leaves and branches of beech trees. They are recognized by the white, cottony substance that strings out in fairly long threads from their body (Figure 1). As these aphids feed, they secrete a sugary substance called honeydew on to the leaves and branches. This honeydew serves as an excellent medium for growth of the sooty mold fungus. Sooty mold is characterized by the black, crusty substance that colonizes leaves, twigs, and branches (Figure 2).

The beech blight aphid is a natural part of the hardwood forests where beech is found. Although infestations of this insect occasionally develop on forest-grown trees, no mortality has ever been reported. If unusually high aphid populations should reoccur in high value recreation sites, insect numbers can be reduced or eliminated with the insecticide Malathion. This insecticide is registered for the control of aphids on beech.

Sooty mold fungus can cause premature leaf fall and some branch dieback. However, no tree mortality has been reported due to this fungus. It can be effectively controlled by controlling the associated aphids.

Heart-rot of beech was also observed. The American beech is particularly subject to attack by many heart-rot fungi which are capable in time of rotting the entire central cylinder (Figure 3).

These trees can persist for many years in this condition. Heart-rotters generally invade beech after fires or through wounds made on the bark. The latter was especially observed along hiking trails where initial engraving was popular. Hikers should be encouraged to discontinue this practice. The enclosed brochure may be of help in this matter. More brochures are available if you'd like to have them.

The elms at Buffalo Point were defoliated by the elm lace bug, Corythucha ulmi O. & D., (Figure 4). This insect has been recorded in many eastern states and will probably be found wherever American elm, its only known host, grows.

The elm lace bugs feed on the sap on the undersurfaces of the leaves. This may happen as early as mid-June. Successive years of severe defoliation to young trees (1 - 7 years of age) can cause growth loss and eventually death. These insects can be controlled with Malathion or carbaryl.

Sincerely,

ROBERT C. LOOMIS

ROBERT C. LOOMIS
Field Representative, Alexandria
Forest Insect and Disease Management

Enclosure "Trees Need Their Skin, Too"

cc: D. G. Warnock, Santa Fe

PAD:elc

Figure 1. Beech blight aphids, Prociphilis imbricator (Fitch) feeding on the undersurface of beech leaf.

Figure 2. Beech leaves and twigs encrusted with sooty mold fungus.

Figure 3. Cavity in beech caused by heart-rot fungi.

Figure 4. Elm defoliated by elm lace bug, Corythucha ulmi O. & D.

United States Department of the Interior

NATIONAL PARK SERVICE
SOUTHWEST REGION
P.O. Box 728
Santa Fe, New Mexico 87501

REPLY REFER TO:
N34(SWR)ONR

JUL 11 1977

U.S. Forest Service
Southeastern Area
State and Private Forestry
2500 Shreveport Highway
Pineville, Louisiana 71360

Dear Sir:

A natural area survey is being conducted on several units at Buffalo National River, Harrison, Arkansas. The field personnel on the project are concerned that a "smut-like" disease may be causing problems on beech and an "aphid-like" insect on other species.

We would very much appreciate a biological evaluation of the potential insect and disease problems in conjunction with the natural area survey.

If such an evaluation can be arranged details can be worked out with the park staff--Lorraine Mintzmyer, Superintendent or Keith Whisenant, Acting Resource Management Specialist. The mailing address is:

Buffalo National River
P.O. Box 1173
Harrison, Arkansas 72601 741-5443
Telephone: Comm- 501-365-5443 (office)
FTS- 740-5011 (operator)

Thank you for your help.

Sincerely yours,

Douglas G Warnock

Associate Regional Director,
Park Operations

Contact: Mr. Keith Whisenant